

What is claimed is:

1. A voltage regulator comprising:
  - a reference voltage circuit;
  - a voltage source;
  - an output terminal from which an output voltage is outputted in accordance with a voltage of the voltage source,
  - a voltage dividing circuit that divides the output voltage;
  - an error amplifier that outputs a signal in accordance with an output of the voltage dividing circuit and an output of the reference voltage circuit;
  - an output transistor that is connected between the voltage source and the voltage dividing circuit and ON/OFF-controlled in accordance with the signal outputted from the error amplifier; and
  - a current adding circuit that controls an operating current of the error amplifier in accordance with the output voltage of the output terminal and the voltage of the voltage source.
2. A voltage regulator according to claim 1, wherein the current adding circuit increases the operating current of the error amplifier when the output voltage of the output terminal is higher than a predetermined value.
3. An electronic device comprising the voltage regulator according to claim 2.